113, 502, 805, 821

Nomoi	OR14
Puluwat	OR17
Southwest Islands	OR18
Ulithi	OR20
Woleai	OR21
Yap	OR22

/For information on native astronomy in the central Carolines, especially the Sidereal Compass, and the Calendar and Almanac, see 18: Goodenough, OR19 Truk, category 116./

1: Burrows--79 (1947-48) Woleaians
116, 502, 821 Ifalik

"For some reason, Sarfert was told that the old lore of navigation had been mostly forgotten. But the two best navigators of Ifalik were away at the time. He did collect names and positions of 28 stars, which correspond fairly well to the 32 given me; and some other details. However that may be, Tom had a remarkable amount of 'talk for cap'n' in his memory. The supernatural part of it has been given. What we would consider the practical part follows. Even this has many details that seem to us fantastic and impossible; notably the bits about sighting particular birds and fish at particular places. Some of the guiding stars named for certain islands, even, are not accurate, according to our charts. Yet conceivably they may serve the purpose, for some reason of wind or current. It is noticeable that the directions have not the vagueness and inconsistency of the myths. At any rate, canoes are able to reach neighboring islands most of the time, though being lost at sea is unquestionably one of the people's haunting fears. Directions for more distant points are little used and may be more dubious.

Fig. 16 shows the positions of the stars used for navigation in Ifalik; of the nearer islands and reefs; and a few of the more important ones at greater distances. Tom gave them to me from memory, but with a compass before us; and I wrote them down on sheets of paper with circles drawn on them like those on Figure 16, marked to show the points of the compass. This kind of notation was suggested to me by Tom's occasional use of English terms for points of the compass. He approved it, and at times supervised my notations closely, so far as directions are concerned."

"Damm, from a sketch by Sarfert, shows positions of some stars on a rectangular figure. Undoubtedly Tom's approval of my use of circles came from his familiarity with the European compass. It is questionable whether natives unfamiliar with the compass would conceive the universe with either square or circular boundaries. What they would have in mind, pretty surely, is something corresponding to the horizontal lines of Figure 16, which represent the courses or paths of the stars from rising to setting. When I asked Tom what a navigator would do when his guiding star was not in sight, he said 'He must know the road for that star.' Damm, too, speaks of the road of a star (die Bahn dieses Sternbildes) and may be quoting, via Sarfert, a native expression.

To save space, the corresponding charts for other islands are summarized in Appendix I. This does not exhaust the lore in Tom's memory. After giving me the lists from several islands, he asked me whether I wanted them all. As the process was taking a good deal of precious time, I decided that lists from the nearest islands and from the three most important farther ones--Guam, Yap, and Truk--would do to illustrate the nature [80] of native lore and suggest the extent of it. How many more he could have given I am not sure. Perhaps not many; but I recall his speaking as if he knew a similar list from Puluwat, which seems to have been a center of particularly high development of native navigation. And probably he could have given several others.

It is noticeable that the lists from the farthest islands are the least complete and

exact. That for Guam, which because of the east-west direction of prevailing winds is the most inaccessible by sail from Ifalik, is the worst of all. Putting Europe north by west from Guam is the nadir. But in that Tom was, of course, departing from anything in native tradition. I suspect that the mistakes in locating Saipan and 'Nuta' (Rota?) from Guam are not errors in his knowledge but in his use of English. He was subject to lapses in which he would say 'south' for 'north', and vice versa. One such would account for these errors. In spite of this, the Guam list is not impressive. Yet the total amount of his memorized information, and the accuracy of a good deal of it, do speak well for native mental capacity."

1: Burrows--80
116, 821, 132, 502

(1947-48)

Woleaians
Ifalik

"Stars as Weather Signs

Stars are used not only to give directions, but to indicate weather. Only a few of these signs were given. They may have some validity for seasonal changes. When the star Maileu (not used as a guiding star, hence not shown in the star chart) is high in the sky before dawn, winds will be light and good for sailing. But when Maileu hangs low over the sea at dawn, and the star Sota comes up before sunrise, winds will be dangerously strong. The star Rangalieli in the east presages good weather. When the star Ul rises before dawn (this would be Tagal'ūlu of Fig. 16), it is a good time for a voyage toward the west."

2; Damm et al. --45-49 (1909) 1938 Woleaians-1-3
116, 502, 821 Ifaluk

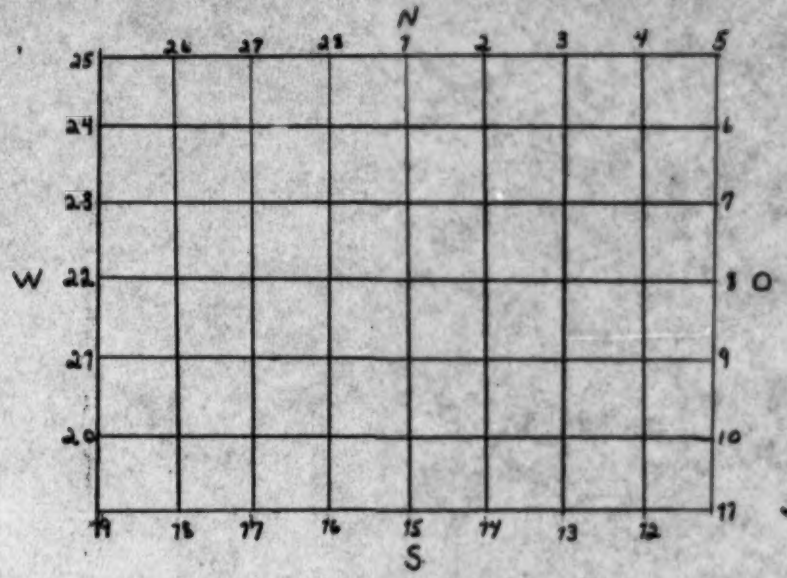

Fig. 143. Compass Rose (sketch by Sarfert).

A knowledge of the stars is the basis for all nautical information. The natives knew the following stars: (fúś).

mŏl	Lyra	eruol	Three Kings (in Orion)
ugelík	Orion	dumul	– Virgo
mărigeŕ	Pleiades	djerewol	Raven
ūl	Aldebaran	lup	
mắilŏb	Eagle	wolewole	
gŭi	Fish, an enormous star, which travels all over the heavens;		

ugelík and erŭŏl belong to it. [46]

lăke		dagalíp	
dŏbi		mŏlărŭl	
fdj		mắidjik	
mắlu		ắlalimẽi	Milky Way

mắlăm moon, the natives knew about the man in the moon, or Liganós: but they had no more exact information about him. The sun had no significance, whatsoever. Sarfert did not give a native term for it. They had no conception of the stars; the Yap inhabitants had told them that they were stones! Shooting stars - jajăle fúś.

Drawing 143 shows a picture of the compass rose; the horizon was conceived in a rectangular form; point 1 is the place where a star rises in the vicinity of the polar star;

it sinks in number 15, so line 1-15 represents the course of this constellation. The same is true of the other constellations. [47]

Drawings 144, 145 show the position of the stars in the heavens at various times; when Altair goes down , and when it is at the zenith.

The natives know the following directions:

north	jifaṅ	northwest	ilodolifaṅ
south	jǒr	northeast	kodolifaṅ
west	ilodǒu	southwest	ilodolijǒr
east	jǒdou	southeast	kodolijǒr

[AN: the terms for the directions of the winds, pages 47-49 of source have been omitted.]

2: Damm et al. --131-132 (1909) 1938 Woleaians-1-2
116, 502, 821 Aurupik

The nautical knowledge of the Aurepik islanders is not inferior to that of the other Caroline natives, for example the Polowat men. Sarfert's authority, Captain Wasäu, had visited all the islands between Ngulu in the west, and Satowal in the east, in his canoe; he had also sailed to the Marianas (Guam, Rota, Tinian and Saipan).

The heavens (star is fűis)

1.	Eagle	mäilöb	9.	Three Kings (in Orion)	elűel
2.	Aldebaran	ül	10.	Raven	serewől
3.	Pleiades	märegīr	11.	Virgo	dűmur
4.	Procyon	mäl	12.	?	medärű
5.	Orion	ugelik	13.	?	dagalibu
6.	?	wőlago	14.	?	madje - mäidől
7.	?	mäilöb barāwäri	15.	?	wőlewol - elibu
8.	?	wőlewől			

The moon is märäm (new moon - lűgulaőli märäm, full moon woninäbäli märäm, waning moon - äliolän, waxing moon - jaurugili märäm).

Fig. 222 shows the Aurepik compass. Numbers 1-15 give the starting points of the stars in the preceding list, and with the same numbers; 16-28 show where they disappear below the horizon (compare Damm and Sarfert, 1935, page 89). [132]

The names of the points of the compass are:

north	jíwaṅ	northwest	lodoáwäṅ
east	chodū	northeast	chodoáwäṅ
south	jŏr	southwest	lodoár
west	llodŏ	southeast	choduŏru

There was naturally little material available about their nautical information. Among the stars (star - foi-l) they knew the

polar star -	olūol	Eagle	mailop
?	uolāgor	Three Kings	
?	ugeliga	(in Orion)	ōliōl
Procyon	māl	?	ɣarawūon
Pleiades	maraegiri	Virgo	tumur
Aldebaran	oūl	?	metarū
?	matjomaidan	?	tubulūp

2: Damm et al. --196-197 (1909) 1938 Woleaians
116, 821 Faraulep

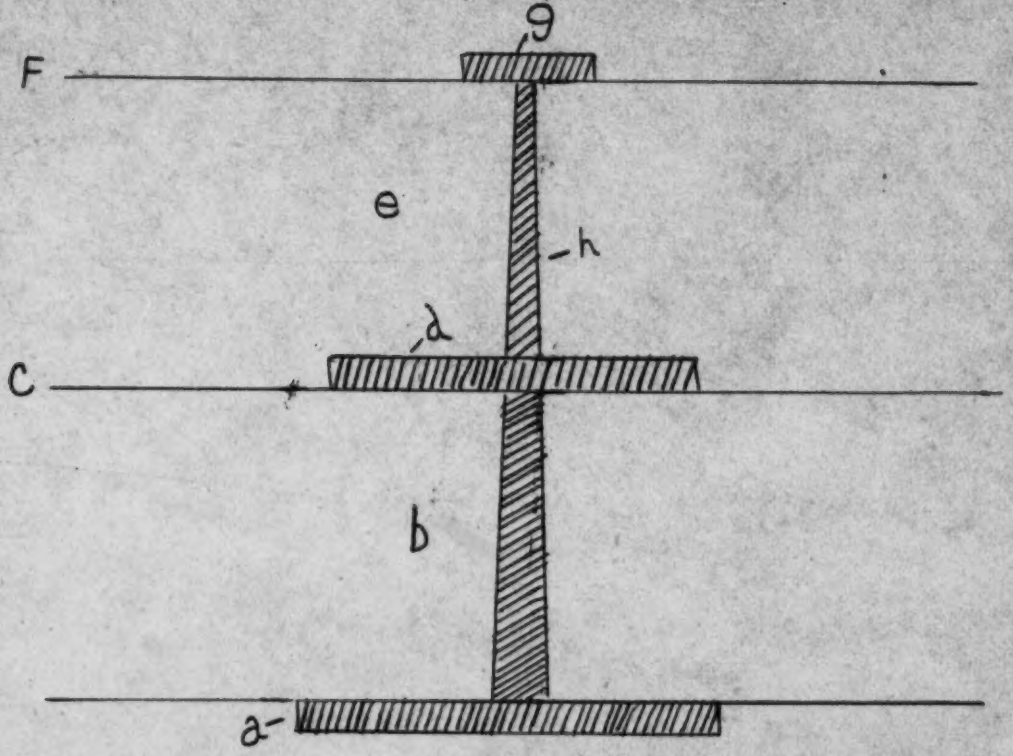

Fig. 272. Diagram of the Universe (after Hambruch's sketch).

At a meeting of pilots, presided over by Arrumiat, the captain fixed the lines of their compass cards. On the table in the cabin a figure was laid out with the aid of beans and the captain copied it on paper as well as possible. "When I thought that I had set up the wrong figure by the choice of my points and wanted to improve it and to make it into a more perfect quadrant I was not allowed to do so. When I repeatedly rounded the corners of the square figure I was requested to leave it as it was and for that reason it must be accepted in the condition it is."

They divide the horizon up into four quarters or perhaps better into two semi-circles: the [129] eastern and the western, Uebuel* is the name of the Polar Star and Mailab** is Orion's Belt. The three points which are meant to represent east and west are all called Mailab and Tubule mailap. None of the three has a special name, but only the general term for all of them is known. It is noteworthy that there is no term available for East to North or West to North. On their compass card the corresponding points are North to East, Northeast to North and Northeast to East, but East to North is not included; the place for it remains empty. The same thing happens in the four quadrant, although the points of these angles seem to equal ours. Their third quadrant resembles the fourth, but the second does not bear similarity either to the first or one of the

*Hambruch on Elato: uĭluĭl
** Hambruch: ŭliŭl; Altair, mai i lŏp.

others. Their first quadrant is divided into 8 parts, for Tagale mol corresponds to NE; of the eight only seven are marked and have names. The others are not divided up evenly but are arranged in the manner shown in the figure. I was unable to find an explanation for this peculiarity.

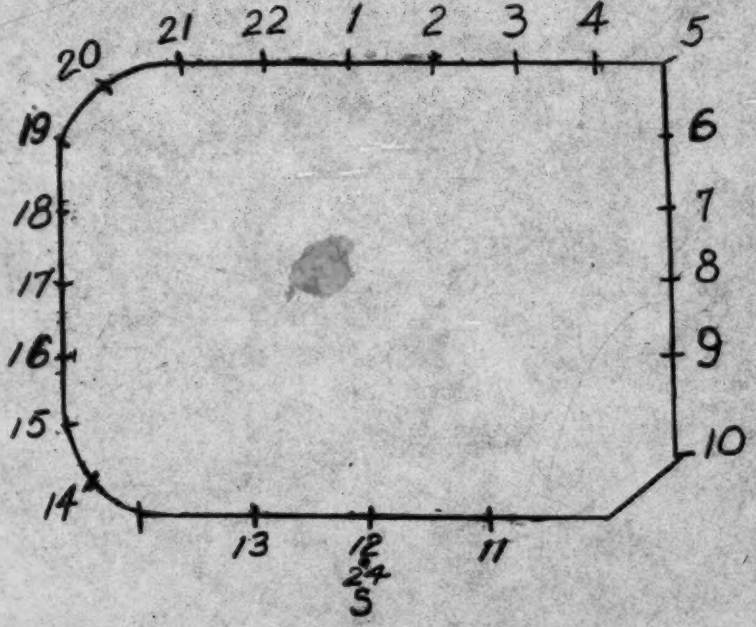

Fig. 66 Compass Points of the Carolines according to Sanchez

4: Krämer--128-132
116, 502, 821

(1909) 1937

Woleaians-3
Lamotrek

Compass points of the Carolinians, Sanchez 1866, Figure 66	Record by Krämer, 1909.	Compass points of Ikeram on Pollap with the number of little stones.
1. Mailab Ueleuel	1. volevol iefang N.	1. volevol, star fúmaket from Sog to Póloat [130]
2. Tagale mailes pelevant	2. mailap ále fang 15° (little bear)	2. mailúpélefang
3. Tagale olego	3. volégo 30° great bear	3.
4. Tagale iguelie	4. úgulúg 36° Cassiopeia (island of Pikelo)	4. ugulik
5. Tagale mol.	5. mäl 51° Vega	5. mol
6. Tagale mangariguec	6. magariger 63° Pleiades	6. moiriger to Póloat, Tamatam
7. Tagale ul.	7. tagalul 73 1/2° Aldebaran (Island of Goteu)	7. un
8. Maitab	8. mailap 81° (Sëtoval, Poloat, Djug, Rálug, Falepei, Gadjau)	8. dál mailap voyage to Botelés (ku.), from there to Truk by un

9. Tagale eliel	9. tangali elüel 88° Orion Gürtel Orion's Belt between 8 and 9 Atair 99° sarabol Raven 68°	9. a liel
10. Tagale lumur	10. tumur 64° Antares (book by Faroilap) metaru (2 eyes) 52° Scorpion	10. tumur voyage to Pőleat return by mől arebol mareg galu
11. Tagale liup	11. tagal lup 27° (Pikeram from Sog, back by 3.) medje meiet (medj in between)	
12. Mailab delub	12. volevol iaur S. medje-meitol	12. volevol to Sog galu mareg arebol

4: Krämer--128-132 (1909) 1937 Woleaians-5
116, 502, 821 Lamotrek

13. Tubule liup	13. lupu metaru (Pikêlo back by)	
14. Tubule lumur	14. tumur sáraboi	14. tumur
15. Tubule eliel	15. tubul elüel	15. e liel
16. Tubule mailab	16. tubule mailap W. (Ifaluk, Volea, Sorol, Ngolu)	16. türun (tóron setting) e mailap
17. Tubule ul.	17. ul (7)	17. toron un
18. Tuble magarigueo	18. magariger (6)	18. moériger
19. Tubule mol	19. mël (Faroilap 5.)	19. mŏl
20. Tubule igueli	20. ugulüg (4.)	20. ŭgulik
21. Tubule olego	21. voelĕgo (3.)	
22. Tubule mailab pelevant	22. mailapalefang (2.)	22. mailŭp elefang dolel fŭmáket
23. Ueluel = N.	23. volevol	23. volevol fumaket
24. Olelup = S. [132]		

The reporter cannot recall the names of the stars of the unknown points in the lower section. There existed some analogy with the upper points.

4: Krämer--134-137
116, 821

(1909) 1937

Wolealans-1
Lamotrek

The Winds

from the North	iefang	from the South	iaur
	efangelap		aurulap
	gailoil		aurulesol
	fangileás		lotoár
	gotuáfang	from the West	iletóu
	gotu mei		lotóelap
from the East	gotu(e)		lotoáfang
	gotuór		efángilesol
	eroileas		

It is said that star winds exist which arise with every new star. When a star rises they are generally easterly and when it sets they are westerly. [135]

Constellations (their rise: tagal, their setting: tubul, according to Hambruch)	Time	Winds mor, strong; djigor, light
Aroturus aremoi (Truk: aremoi	October, beginning of the monsoon.	easterly wind: balaremoi (meaning of ba: coming out of the water)
djóu (dróu) (Truk: djéu) Corona	Rise in December	mor a djou; strong easterly winds for a few days

			dji geredjou; less violent winds for seven days.
Antares	tumur (Truk: tumur stands for the Great Bear)	Rise in December	mor a tumur; strong easterly winds. They are too violent to allow sailing, which is possible at the most on the inland waters. djigerë tumur lighter winds
	metáriu (Truk: measáru)	rise in January	mor ale metáriu, easterly winds westerly winds at the time of the setting of the constellation.
Atair	mailap (Truk: the term stands for the Eastern Star)	rise at the end of January, in the morning	djigerali mailap; less stiff winds
in Pegasus	seõta (Truk: sõeda)	rise	mor seota, good easterly wind

4: Krämer--134-137
116, 821

(1909) 1937

Woleaians-3
Lamotrek

	tëbbi	beginning of February --	djigerali seota winds lasting for ten days mor a tëbbi last only for a few days
Pegasus	lag	beginning of March	mor a lag; stiff, strong and indefinite winds.
	gap	end of March	moi tagale gap (moi i tag "to break upon arising"), uncertainty as to strength; last for a few days mor ale gap, strong } last djigeraligap, weak } about 2 weeks
"Fish"	ig	end of April	mor alig, strong } good djigeraligap, weak } weather
	alimento, the stomach of the ig		moi le alimeto, easterly winds for two days, followed by westerly winds

4: Krämer--134-137
116, 821

(1909) 1937

Woleaians-4
Lamotrek

Pleiades	magárigar (Truk: moériger)	April	tafalimagárigar, evening wind when the Pleiades stand at 30'; when they set at night there follow calms, mopele magárigar [136](mop, to drown; see Onoun); this is the best time for angle fishing, when the water is calm, without strong currents.
	when mag rises in the East	in May	the wind is known as kobuádj; the word is derived from uádj "to cook," because for 6-12 hours violent easterly winds prevail, which make the ocean appear as if it is followed by djigerali mag.

			which lasts until the ul sets in.
Aldebaran	ul	middle to end of May	djelul, renders the water ripply, because often short squalls blow from the East and Northeast.
Orion	irir ali ol (eliol, Orion's Belt)	July	westerly winds for 2-3 days when aliol rises in the morning, light rángaliol blow from the east for 2-3 days
Sirius	mal, gongalemál or golongalemal	early in June	westerly winds for 1-2 days, but uncertain
		sets about the middle of June	liurap (from rap "to cover, lay down close together) alemál, calms.
Mist in the Lion	idj	setting between July 1-15	westerly winds kalangalidj for about 14 days, followed by easterly winds djangalióI, (from djang

			"to hang up" when aliol stands at a certain height)
Regulus	ililigëk	July-August	eangalililigek blow SW, W NW for about 6 weeks without intermission when the tail of Canus major (sirius) rises; eangali faliuk alimal is the last of the period and is easterly (faliuk from iuk, tail and mal, see above).
Southern Cross	bup	end of August to the beginning of September	djep alup strong southwesterly winds, with generally clear weather
	gap	setting in the evening at 35°	for 12-24 hours the easterly ëtang prevails (sitang, ëtang "the pressing down"

			-- of the bupi djep)
Canopus	gap i eaur	equinox	the winds may be changing and may come sooner or later
		upon setting	atangaligap, easterly winds for 1-3 days
Arcturus	áremoi (see above)	upon setting	eang ali aremói mopolog ali aremoi (mop "to drown"). [137]
	efang àlúl	rise at the time of the breadfruit harvest, 15 days after ul (Aldebaran)	strong easterly winds prevail for half a day and blow down the ripe breadfruit
	póulimal, the lowest star of the tail of Canus major "shakes the animal (mal)"		easterly winds preceding eangalifaliuk (see Regulus)
			in the same manner the

on the fishing line | | wind shakes the bread-fruit trees.

[ER: An additional list of stars and constellations is given in the source, but omitted here]

4: Krämer--134-137 (1909) 1937 Woleaians
821 Elato

[VMM: For the natives' knowledge of the winds, see Lamotrek, 4: Krämer 134-137.]

4: Krämer--151-152 (1909) 1937 Woleaians
116, 789, 821 Lamotrek

Some songs have been given...magic songs of rain: If there is too much rain and it is to be ended, conjuration is done by an address, by the Triton's horn, taui, and [152] by means of a rain switch made of the coral plant kaini lidal; it is handled by a professional conjuror. As the magic song is chanted, the switch with the horn is swung in the direction of the clouds, after the horn has first been sounded with all possible strength. alis ali touber is the magic song for the purification of the house of Ikelur (house 3); no one must be present while this magic is made with the exception of Faragau (house 1), because Ikelur is afraid that he will have to die otherwise.

The Wands of Storm Magic, gosilifei

The spirit Roiang...learned about storm magic from the spirit Tipoeo, who in turn had been told about it by Aluelap. Storm magic was vigorously practiced at the time of the visit of the expedition. We could see that from the objects publicly displayed on the beach of Lamotrek which are shown on photo 4d [VMM: see source]. The drawing of Figure 76 [VMM: see source] even more distinctly shows this arrangement on the beach. One observes that a Triton's horn is hung up with it and that a sacrificial offering is attached to the top. Another specimen, given to me by Ikelur, is in the Linden Museum in Stuttgart no. 77830 (see photo 7) [VMM: see source] and many coconut pinnae are tied to it. [156]

...the Central Carolinian sorcerers, the vah, fight the storm with ray spines on their wands which are greatly feared in combat and are considered one with the god Saulal....

The wood represents the god Aluelap and the cement unites the two. The stings, sometimes, are turned against the conjuror himself when he tries to force the realization of the wish. The janus head represents Paluelap and Aluluei...who are supposed to look out to all sides. Accordingly at the very beginning of a voyage when the mast is planted, one makes the fore alus for Aluluei....it has been said that he appears to be one with Aluelap or Paluelap. Therefore the janus head is supposed to represent Aluluei and has two eyes in front and two in back....Such magic figures are attached to canoes or set up on land (see idols on Figure 77, 78). [VMM: see source] [157]

4: Krämer--155-157 (1909) 1937 Woleaians -2
116, 789, 821 Lamotrek

The latter are dedicated to Ligóubub. . . and are called ëpil alu; ëpil has the meaning of lower, e.g., the root of a tree or the bottom of a bowl. The root of the plant ëlau is scraped; the scrapings are put into coconut juice and the liquid is drunk against illness or wind. They are kept inside of houses, but otherwise are identical with the others mentioned. The kuling. . . is said to have given directions for the magic figures. The meaning of the ray spines, ohét, remains unknown.

4: Krämer--272 (1909) 1937 Woleaians
116, 502, 821 Woleai

Prerequisites for a Successful Voyage to Feis

favorable seas, djeger ali ĕle métau
favorable winds, djeger ali gūi (gūi, month of August)

during the good season, muriliefang, which is the name for the monsoon period at the end of the gui month. At that time, the star māl (Sirius) is visible in the sky and in the north the ūgelík is seen.

When e áiimeto appears in the morning sky, the wind is favorable (on the return voyage it is the gáp, Spica and the eramoi=aremoi, Arcturus). Unless these stars are out, the sails are hauled in and the canoe is left to drift until the stars become visible once more.

The voyage is divided into stages, gátag; a certain number of them apply to one course. The first gátag, for instance, is determined by the period of time needed by the canoe to sail out of sight of the island; it is checked by a member of the crew who climbs the mast for a better lookout. The first course by the ūgelik lasts until the fourth gátag (northwesterly direction); the second course is taken by the constellation magĕreger, the Pleiades, and amounts to only one gátag (west); the final course is taken by the māl and it includes only two more gátag (northwesterly).

24: Christian--388-389 (No date) 1899 Woleaians 1-2
116, 821 Lamotrek

"LAMOTREK STAR-NAMES

1 Uiliuil-al-evang. The Pole-star.
2 Uiliuil-al-eaur. The Southern Cross; also called Pup, or the Leather-Jacket Fish.
3 Tumur, Antares.
4 Meal. Vega and a Lyrae.
5 Ualego. Ursa Major. Literally, 'The Broom.'
6 Ul. Aldebaran. Literally, 'The Virile Momber.' [389]
7 Evang-el-ul. Capella; its appearance denotes heavy gales and bad weather.
8 Magarigar. Pleiades.
9 Oliel. Orion and Rigel.
10 Kolong-al-mal. Sirius; i.e., literally, 'The Body of the Animal.'
11 Ping-en-lakh. Arietes; i.e., literally, 'The Centre of the House.'
12 Met-a-ryo. Scorpio; i.e., 'The Two Eyes.'
13 Sor-a-bol. Corvi; literally, 'The Viewer of the Taro-patches.' Shines during Taro season. (Sor, to look; bol, a Taro-patch.)
14 Tchrou. Corona; i.e., 'The Fowling-net.'
15 Mai-lap. Althoea and (a) Aquiloe.
16 Aramoi. Arcturus. (Ara, to conclude; moi, to come.)
So called because the rising of Arcturus marks the end of the north-east winds which bring visiting parties to the island.

17 Yuk-ol-ik. Cassiopoea; literally, 'The Tail of the Fish.'
18 Mongoi-sap. Gemini.
19 Ik. Pisces.
20 Mal; man. Canis Major.
21 Ililigak. Regulus.
22 Gapi-sarabol. Speaker
23 Ngi-tau. Piscis Australis.
24 Gapi-lah. Pegasi."

28: Spiro--46
116, 821, 177, 804

(1947-48) 1949

Woleaians
Ifalik

"The sky, is a physical object, in the shape of a dome, which meets the oceans at its extremities. The surface of the earth--land and ocean--is flat, and is bounded by the sky at its limits.

Though the world is bounded and the sky is a material, impermeable object, no native has reached these points. The chiefs asked me whether any American had ever reached north or south. That is, these terms do not serve merely as directional indicators, as they do for us, but they are actual physical places, which one reaches if one travels far enough. They also wished to know if any American airplane had ever flown to the sky. The Japanese had told them that they (the Japanese) had done so."

The sun, moon, and stars, are fixed to the sky, and move along it, much as a train moves on its tracks, so that the sun, for example, has its ial, its path, which it follows every day. The people assign the same function to the sun as they do to the moon and stars--to provide light. Were there no heavenly bodies, people would die, say the natives, because they would have no light by which to work. [47]

The causes and functions of other cosmic phenomena such as rain, wind, thunder, lightning, are unknown. It is not realised that rain is necessary for the growth of vegetation, nor should this be surprising, since there is no period of growth nor its concommitant destruction of crops which would indicate such a relationship."

28: Spiro--75 [2]
116, 787, 821, 177

(1947-48) 1949

Woleaians-1.2
Ifalik

"We have already described in detail the rituals employed in healing. But divination is also used in healing, as well as in predicting the weather. Divination, called trip or bweng, is practiced by means of coconut strips, the configuration of the knots being interpreted as a predictive mechanism. (31)"

"31. [See following sheet for footnote 31.]"

28: Spiro--75 [2] (1947-48) 1949 Woleaians-2
116, 787, 821, 177 Ifalik

"31. [Footnote pp. 75-76] One afternoon I saw Maroliger divining for a sick woman. I asked Tom what he was doing, and he replied that this was 'Katt', that is, he was playing cards. I didn't press the issue any further, assuming that Tom was reluctant to speak about the matter, and making a note to ask him about it at a later time. It was entirely accidental that I later learned what he had meant. In the latter part of November we had a few days of heavy wind, that the natives called a minor typhoon. Trees were blown down, the waves were coming on shore. Since there was little I could do, I spent a part of one afternoon playing 'solitaire.' While playing, Tom came to see how we were weathering the storm, and found me playing cards. Now previously Maroligar had seen Dr. Burrows playing, and after each hand Dr. Burrows would say, 'Good', or 'bad' [76] depending upon whether or not he had won, and Maroligar had interpreted this evaluation to mean that Dr. Burrows was divining for something. When Tom came that day, he told me that the people were very disturbed about the storm, and that he too was worried, and would be unable to sleep that night. But he insisted that I finish my game so that I could tell him whether the storm would continue or would abate. Wishing to put his mind at rest, I told him that the storm would stop. He sighed with relief, and was most happy, because Maroligar's divining by means of the coconut strips had predicted the same thing."

28: Spiro--76
116, 821, 789

(1947-48) 1949

Woleaians-1-1
Ifalik

"With regard to the weather, however, its course is not only predicted, it is controlled. If the divination indicates continued storm, then an incantation is recited which can control the weather. Only the navigators, know the technique. The person sits on one of the stone piers, and blows a conch horn. He then points it into the storm, and recites the appropriate verses. One of them collected by Dr. Burrows follows:

Incantation to drive away a storm

Dark clouds, the horn!
My god-invoking horn!
My talk goes to the clouds like fire.

Don't come near dark clouds!
Stay far away!
No more, no more, no more!

Turn aside, wind and cloud!
Bad weather turn aside!
Die away,
Move away!

Depart bad weather!
Come good weather!
Fair and bright.
Let there be fine days!
Cloudless the sky.

There are also incantations to clear the weather, (involving the breaking of the rainbow, which they think causes the storm), to drive off rain, to bring a departing canoe safely home, to keep a canoe afloat. I quote this one because it is typical. They are all attempts to control the elements by magic--that is words and gestures. It will be noticed that the bad weather is not caused by a supernatural agency but is conceived as an autonomous entity."

28: Spiro--97 [2] (1947-48) 1949 Woleaians-1-2
116, 856, 593, 621, 821 Ifalik

"As the child grows older and becomes aware of the world about him, he also becomes aware of the patternings of relationship and of interraction between himself and others about him. Before examining the pattern of those relationships, it may be well to point out two facts of general consideration. Though the family is the most important institution in defining patterns of interraction, the family is not as crucial a group here as it is in other cultures for two reasons. In the first place, the family is seldom together at one time. The father is in the canoe house, the mother in the taro patch, the children are playing, the young people are about their activities. There are few meals at which the entire family is present, or required to be present, people eating when and where they choose. On the other hand, there is little distinction between one's own relatives and 'strangers.' Every one knows every one else in the village, so that the child moves in a world in which there are no strange faces or strange people towards whom one's behavior must be different. All individuals look alike and all treat him alike. If he is hungry any of them give him food; if he needs something anyone will try to satisfy his need. Every house is open to him and he never has to learn that some houses are different from others; he can walk into any house (without knocking) at any time of the day or night.

These two facts add up to one general point of psychological significance. Children grow up in an atmosphere of at-homeness with many people, but there are no deep ties

with a particular group of people, known as the family. There is a more intimate relationship between the child and his household than with other people. But, except for infants, there is no greater intimacy between the individual and his primary family than between him and his household."

28: Spiro--119-120 (1947-48) 1949 Woleaians-1-4
116, 841, 881, 821, 539 Ifalik

"When a girl's mother sees that her daughter's breasts are developing, she informs her to be prepared to menstruate. The fact of menstruation (taurang) is, of course, no secret to the girl. She has by that time witnessed a number of menstrual ceremonies and has observed all her life that menstrual women retire to the menstrual hut. The mother not only prepares her to expect the menstruation but informs her that it is of serious social implication for her. She points out that the girl is about to enter into adulthood and must prepare to assume adult responsibilities and to occupy an adult status. Her carefree days of play must come to an end, she is told, and she must remain in and near the house, observing her mother's activities, and learn to make skirts and become adept in the economic functions of women. Should she not take these responsibilities seriously, she is told, people will poke fun at her, and call her a 'fool fellow', which means that she will not obtain a husband. The mother cannot tell her the meaning and function of menstruation, since she does not know herself. Menstruation, like many other natural phenomena is inexplicable to the natives.

When the girl first sees flood she informs her mother, who in turn informs her husband and the members of her own family. Her husband informs the members of his family. Both families then repair to the girl's house, bringing red paint, beads, and a skirt. The father brings her a special gift of coconuts. Her entire body is smeared with paint, she is bedecked with beads, flowers, and the new skirt, and then the women sit

round her, while she stands in their midst, and sing the following song. If the song is not sung, it is believed, that rain will fall in torrents. [120]

The rat climbs up on the clouds
He drinks the rain so it won't come down
He drinks No more (shouted in crescendo)
Permit not the rain to come
Today it may fall
No more
Let the rain stop when it strikes the breadfruit pits
Away with the clouds
Not a cloud in the sky
Two babies, children of Liol
They paddle out and chase the clouds (from the north)
They paddle out and chase the clouds (from the south)
The foreskin, the foreskin
Back with it, back with it
Back with the foreskin (2)

"2. [See following sheet for footnote 2.]"

28: Spiro--119-120 (1947-48) 1949 Woleaians-3
116, 841, 881, 821, 539 Ifalik

"2. [Footnote p. 120] The fanap, the townhall', is distinguished by, among other things, the huge carved phallus attached to the front pillar. But the pillar has other representational objects. On one side, carved in bold relief is a giant lizard. On the other side is painted a large fish. In front, under the phallus are painted small, stylized fish (the same kind as are tatooed on the natives' arms and legs), a rat, and flowers. Now, without claiming dogmatically the validity of a universal symbolism, this juxtaposition of objects, seemingly discrete and disparate, does make sense in terms of psychoanalytic symbolism. The fish, the lizard, and the rat are all phallic symbols, so that the rat and lizard phobia, revealed in the SERT can now be understood as penis phobias. Logically and culturally there is no explanation for their juxtaposition. Psychologically (in the unconscious) their juxtaposition is quite consistent, being symbols of the already obvious and consciously understood carved penis. And if a rat does symbolize the penis then the rat in this song may very well mean the same.

At the same time, the flower is a symbol of children in psychoanalytic symbolism, and again, from this point of view, it's presence here is not bizarre at all, but quite consistent. It represents the greatly desired product of the penis, children. This is given additional credence by the fact that in many songs a mother refers to her child as the flower of her ear. The ear is extremely interesting in view of the widely spread belief in conception through the ear, as in the case of Mary having conceived Jesus by being impregnated by the Holy Ghost through the ear."

28: Spiro--119-120
116, 841, 881, 821, 539

(1947-48) 1949

Woleaians-4
Ifalik

This song is repeated a number of times, and while singing, the women perform a sitting dance, which involves the same lascivious movements of the arms and body that we have noted in the case of the bwaruch."

28: Spiro--121 [2] (1947-48) 1949 Woleaians
116, 821, 841 Ifalik

"Again, should the [WPM: menstruating] woman not remain in seclusion, fish would not enter the lagoon, as they fear the menstrual blood. In this case too, vegetation would die, and the 'chief am very angry at that lady.' Should she walk near the southern end of the island of Felarik, where the Rangona tree grows, a typhoon would ensue."

28: Spiro--141
116, 764, 171, 821

(1947-48) 1949

Woleaians
Ifalik

"Ocean burial is not the rule in the Central Carolines. On the contrary, Ifaluk is the only culture that practices it, the others burying their dead in the ground. The natives say that there are two reasons for this practice. If the corpse is not removed from the island, a typhoon will destroy the idland. If the corpse is buried in the ground, its body fluids will mix with the soil, causing the vegetation to die. (3)"

"3. It should be noted that the fear of the presence of the dead is related to two of the people's most severe anxieties--the lack of food, and typhoons."

41: Bates & Abbott N-5 (1953) 1958
OR21 Woleai OR21
Ifaluk

gauge wasn't unpacked and set up yet. A stiff wind came up in the afternoon and kept increasing in force. Late in the afternoon Tom came by with Maroligar, the number two chief. Tom pointed out across the lagoon to the west and said, "Maybe typhoon." Maroligar seemed somewhat worried as well. What the two wanted, apparently, was a weather prediction—from us newcomers to the tropical Pacific! It showed a touching and completely misplaced faith in the famous "American know-how." I was in charge of the meteorology department and I peered at the thermometer (79°F at 5:45 P.M.) and barometer (1005 millibars) but I was unable to draw any deductions from these helpful facts.

In the evening, quite a number of men gathered in back of the Fan Nap, clearly worried about the weather. Maroligar borrowed one of the big Navy battery flashlamps and learned how to turn it on and off. He wanted some sort of a light so that if the weather worsened during the night, he could round everyone up and lead them to some safer spot, perhaps the boulder ridge on the windward side of the island—the highest spot, some fifteen feet above sea level. The houses were mostly along the lagoon shore and Ted remembered that waves had reached to the Fan Nap on his previous stay, with a wind of considerably less than typhoon violence. Don and I read what there was on typhoons in the books we had brought along, and I tried to remember what I could about the characteristics of Caribbean hurricanes—but nothing helpful came out of this.

The wind settled down to a steady blow, and I comforted myself, going to sleep, by thinking that hurricanes struck suddenly, after a period of still, oppressive heat, so that this slow build-up of wind could hardly be dangerous—misinformation, but none-the-less comforting.

The next day, Saturday, started out cold, with a completely overcast sky. But the rain had let up, so we sallied forth to begin work. Our first project was to make a census of the people on the island. Ted had made a census on his 1948 visit and he wanted to get a record of the changes. For Don and me, the census would be an essential basis for our studies of "human ecology." Further, if we made the census our first item of business, it would give us an opportunity to meet all of the people on the island.